

Table 1. Characteristics of summer and autumn sampling stations where YOY Pacific herring and walleye pollock were collected in 1994 and 1995 from Prince William Sound, Alaska.

Abbreviations: T = Trawl, D = Dipnet, B = beach seine, NE = Northeast, C = Central, SW = Southwest. Ten fish per species were examined from each station. Zooplankton were collected at most fishing stations only in 1995; numbers in parentheses indicate adjacent stations substituted when zooplankton were not collected.

year-cruise-station-gear	region and location	bottom depth (m)	gear depth (m)	number caught	sample day	start time
SUMMER						
<u>Allopatric Pacific Herring</u>						
95-1-27D (22)	NE, Port Fidalgo	6	0	271	26-Jul-95	19:30
95-1-110B (112)	C, Southeast Eleanor	3	1	??	09-Aug-95	15:30
<u>Allopatric Walleye Pollock</u>						
95-1-3T	C, Applegate Rocks	162	60	74	22-Jul-95	12:33
95-1-5T	C, Seal Island	174	50-60	31	22-Jul-95	17:04
95-1-19T (84)	C, Lilhengren Passage	70-130	50	139	27-Jul-95	15:37
95-1-53-1T	C, Montague Point	110	50-60	??	01-Aug-95	9:17
95-1-53-2T	C, Montague Point	110	20	694	01-Aug-95	9:55
95-1-54T	C, East Knight Island	130-160	60	1056	01-Aug-95	12:14
95-1-56T	C, Seal Island	200	80	1689	01-Aug-95	15:27
95-1-57T	C, Seal Island	160	75-80	386	01-Aug-95	17:30
95-1-58T	C, North Knight Island	170	75-80	843	02-Aug-95	9:25
95-1-62-2T	C, East Eleanor Island	70-120	50-60	293	02-Aug-95	15:16
95-1-108T (107)	C, Southeast Knight Is.	25-50	10-20	22	08-Aug-95	21:57
95-1-112T	C, South Naked Island	80-140	80	504	10-Aug-95	13:13
EARLY AUTUMN						
<u>Allopatric Pacific Herring</u>						
95-2-5T	C, East Naked Island	50-90	45-65	89	13-Oct-95	11:31
<u>Sympatric Walleye Pollock/Pacific Herring</u>						
95-2-6T	NE, Galena Bay	220	10-15	4156/425	13-Oct-95	21:43
95-2-7T	NE, LandlockedBay	95-106	10-20	535/592	14-Oct-95	21:58
LATE AUTUMN						
<u>Allopatric Walleye Pollock</u>						
94-2-5T	SW, Icy Bay	110-150	35-50	61	08-Nov-94	15:32
<u>Sympatric Walleye Pollock/Pacific Herring</u>						
94-2-6T	NE, Galena Bay	100-150	15-20	145 / 26	10-Nov-94	22:42
94-2-7T	NE, Port Gravina	118	15-21	14/398	12-Nov-94	22:33

Table 2. Size and feeding attributes for allopatric and sympatric YOY walleye pollock and Pacific herring ($n = 10$ each) from PWS stations in summer, 1995 and autumns, 1994-1995. Standard error of the means (SE) in parentheses. Abbreviations as in Table 1.

year- cruise- stn-gear	FL (mm)	% feeders	% fullness index	content %BW	prey %BW	total number of prey	total weight of prey (mg)
SUMMER							
<u>Allopatric Pacific Herring</u>							
95-1-27D	76 (2.0)	100	100	3.8 (0.4)	23.8 (3.3)	5968.7 (604.3)	540.71 (62.8)
95-1-110B	30 (0.3)	60	25	0.0 (0.0)	1.3 (0.5)	52.6 (28.6)	1.55 (0.7)
<u>Allopatric Walleye Pollock</u>							
95-1-3T	59 (1.5)	60	25	0.7 (0.2)	2.1 (1.4)	171.0 (113.0)	14.25 (7.5)
95-1-5T	54 (1.2)	60	50	1.2 (0.3)	3.2 (1.3)	37.1 (14.1)	27.27 (12.0)
95-1-19T	58 (1.7)	80	50	1.8 (0.5)	1.1 (0.4)	12.4 (3.6)	12.11 (5.0)
95-1-53-1T	56 (1.1)	100	75	1.1 (0.1)	1.6 (0.3)	154.1 (27.5)	13.35 (2.4)
95-1-53-2T	62 (1.3)	100	75	1.2 (0.2)	3.0 (0.7)	261.5 (38.9)	34.84 (5.7)
95-1-54T	54 (1.6)	60	25	1.3 (0.3)	0.7 (0.3)	53.5 (30.2)	4.68 (2.2)
95-1-56T	58 (1.8)	50	25	0.7 (0.2)	0.4 (0.2)	21.8 (10.5)	4.86 (2.1)
95-1-57T	58 (2.6)	80	50	1.4 (0.5)	3.1 (2.0)	45.0 (19.6)	38.59 (26.0)
95-1-58T	56 (2.1)	100	100	2.2 (0.4)	3.5 (1.1)	242.0 (84.8)	33.70 (9.6)
95-1-62-2T	53 (1.1)	90	50	1.4 (0.2)	1.7 (0.8)	17.2 (4.3)	15.99 (7.8)
95-1-108T	66 (1.4)	100	100	2.7 (0.4)	13.8 (2.3)	2489.5 (351.1)	193.24 (24.6)
95-1-112T	65 (2.8)	90	50	0.9 (0.1)	0.9 (0.3)	20.6 (4.5)	14.79 (5.0)
EARLY AUTUMN							
<u>Allopatric Pacific Herring</u>							
95-2-5T	92 (1.4)	100	50	1.4 (0.1)	1.6 (0.3)	385.9 (89.5)	103.36 (19.5)
<u>Sympatric Pacific Herring</u>							
95-2-6T	84 (4.3)	90	75	1.2 (0.2)	1.4 (0.4)	927.1 (303.6)	58.63 (11.4)
95-2-7T	95 (3.3)	90	50	0.5 (0.1)	0.8 (0.5)	271.1 (103.7)	84.50 (62.3)
<u>Sympatric Walleye Pollock</u>							
95-2-6T	93 (2.8)	100	100	1.2 (0.2)	1.2 (0.2)	78.3 (14.2)	61.26 (14.4)
95-2-7T	90 (2.4)	90	50	0.5 (0.1)	0.4 (0.1)	46.8 (15.0)	16.79 (3.9)
LATE AUTUMN							
<u>Allopatric Walleye Pollock</u>							
94-2-5T	111 (1.6)	100	100	1.8 (0.4)	0.8 (0.2)	722.6 (156.2)	71.62 (11.4)
<u>Sympatric Pacific Herring</u>							
94-2-6T	93 (4.1)	20	10	0.1 (0.0)	0.0 (0.0)	13.8 (9.0)	0.78 (0.5)
94-2-7T	97 (4.2)	70	25	0.5 (0.2)	0.4 (0.2)	31.8 (14.7)	25.64 (12.7)
<u>Sympatric Walleye Pollock</u>							
94-2-6T	100 (3.1)	70	50	0.5 (0.5)	0.2 (0.1)	18.5 (5.1)	18.29 (9.2)
94-2-7T	111 (1.7)	60	25	0.4 (0.1)	0.2 (0.1)	6.4 (1.9)	14.56 (7.5)

Table 3. Seasonal fish size and feeding attributes (mean and SE) of YOY walleye pollock and Pacific herring from Prince William Sound in 1994-1995. Measures for autumn allopatric (Allo.) and sympatric (Symp.) subgroups are shown for each species.

	n	FL	wet weight (g)	% non-feeders	% fullness index	content % BW	prey % BW	total number of prey	total weight of prey (mg)
Walleye Pollock									
Summer (Allo.)	12	58.0 (1.0)	1.1 (0.1)	19	50 (5)	1.4 (0.1)	2.9 (0.4)	294 (68)	34.0 (5.6)
Early autumn (Symp.)	20	91.5 (2.4)	5.0 (0.3)	5	75 (10)	0.8 (0.3)	0.8 (0.1)	63 (11)	39.0 (8.9)
Late autumn	30	107.2 (2.0)	8.1 (0.3)	23	50 (10)	0.9 (0.2)	0.4 (0.1)	249 (80)	34.8 (7.2)
Allopatric	10	111.0 (1.6)	9.1 (0.4)	0	100 (5)	1.8 (0.4)	0.8 (0.2)	723 (156)	71.6 (11.4)
Sympatric	20	105.4 (2.1)	7.6 (0.5)	35	25 (10)	0.4 (0.1)	0.2 (0.1)	13 (3)	16.4 (5.8)
Pacific Herring									
Summer (Allo.)	20	52.7 (2.4)	1.5 (0.3)	20	75 (10)	1.9 (0.5)	12.6 (3.1)	3011 (739)	271.1 (69.0)
Early autumn	30	90.2 (2.0)	6.6 (0.3)	7	50 (5)	1.0 (0.1)	1.3 (0.2)	528 (119)	82.2 (21.6)
Allopatric	10	91.6 (1.4)	6.8 (0.4)	0	50 (10)	1.4 (0.1)	1.2 (0.1)	386 (90)	103.4 (19.5)
Sympatric	20	89.5 (3.0)	6.5 (0.6)	10	75 (10)	0.9 (0.1)	0.9 (0.1)	599 (173)	71.6 (31.0)
Late autumn (Symp.)	20	94.6 (2.4)	6.9 (0.3)	55	10 (10)	0.3 (0.1)	0.2 (0.1)	23 (9)	13.2 (6.8)

Table 4. Horn's Overlap Index values for total numbers and biomass of prey consumed by YOY walleye pollock and Pacific herring caught separately in summer and together in early and late autumn in Prince William Sound, 1994-1995. No summer sympatric fish were available and autumn allopatric fish were not caught in the same year. Overlap greater than 0.60 indicates similar diets (see text).

Year-Station	Region	Overlap in Number		Overlap in Biomass	
		by prey species	by prey category	by prey species	by prey category
<u>Summer Allopatric Fish</u>					
95	C ¹	0.79	0.82	0.76	0.83
<u>Early Autumn Sympatric Fish</u>					
95-6	NE	0.16	0.22	0.44	0.64
95-7	NE	0.43	0.48	0.53	0.69
average	NE	0.31	0.43	0.55	0.69
<u>Late Autumn Sympatric Fish</u>					
94-6	NE	0.69	0.94	0.08	0.39
94-7	NE	0.86	0.91	0.88	0.91
average	NE	0.87	0.97	0.88	0.95
<u>Allopatric-Sympatric fish</u>					
Early Autumn Herring		0.51	0.89	0.56	0.93
Late Autumn Pollock		0.87	0.91	0.56	0.73

¹One set of herring was caught in the NE region.